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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/782,279	02/14/2001	Yves Michel Henuset	10503-US	8368
23553	7590	11/17/2003	EXAMINER	
MARKS & CLERK P.O. BOX 957 STATION B OTTAWA, ON K1P 5S7 CANADA			LEADER, WILLIAM T	
			ART UNIT	PAPER NUMBER
			1742	

DATE MAILED: 11/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/782,279

Applicant(s)

HENUSET ET AL.

Examiner

William T. Leader

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-9 and 13-23 is/are pending in the application.
- 4a) Of the above claim(s) 22 and 23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-9 and 13-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Newly submitted claims 22 and 23 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: New claim 22 is directed to a reactor system while new claim 23 is directed to a method of treating wastewater. The originally presented claims are directed to a reactor. The reactor of the original claims may be used in applications other than the system of claim 22 and in methods other than the method of claim 23. For example, the reactor of claim 1 may be used in a stream of water from a river directed through the reactor without a reservoir or pump. The system of claim 22 does not require a reactor with all of the specific features of the reactor recited in claim 1.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 22 and 23 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 3-5, 13, 14, 15, 16 and 19-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Sale (6,342,150) for the reasons given in the previous office action and in view of the following comments.

4. Claims 2, 7, 8, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sale et al (6,342,150) in view of Zappi et al (6,328,875) for the reasons given in the previous office action and in view of the following comments.

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sale et al (6,342,150) in view of Zappi et al (6,328,875) as applied to claims 2, 7, 8, 17 and 18 above, and further in view of Haas (4,339,324) and Herbst et al (5,611,907) for the reasons given in the previous office action and in view of the following comments.

Response to Amendment

6. Applicant's Remarks have been carefully considered but are not deemed to be persuasive. At page 7 of the Remarks, applicant argues that Sale et al does not contemplate high flow rates as the present invention does. The claims under consideration are directed to apparatus. The flow rate of the water being treated

relates to the method of use of the claimed apparatus. Applicant has amended claim 1 to recite a pore size to withstand a forced flow of wastewater up to 60 liters/minute. The limitation "up to 60 liters/minute" includes all flows less than 60 liters/minute. This is demonstrated by newly presented claim 16, dependent on claim 1, which recites that the anode and cathode are each sized to withstand a forced flow of wastewater up to about 8 liters/minute. Since the pores of the anode and cathode of claim 1 are sized for all flows less than 60 liters/minute, they may be sized for low flow rates, such as those envisioned by Sale. The apparatus of claim 1 does not differ from Sale on the basis of pore size.

7. Applicant has also recited that the inlet port and outlet port are in sealing engagement with the internal chamber. Page 6, lines 30-32 of applicant's specification teach that while figure 1 shows detachable inlet and outlet ports, a unitary construction is also possible. Figure 1 of Sale suggests such a unitary construction in which inlet 14 and outlet 18 are of unitary construction with the body of the reactor and directed sealed to the reactor. Claim 1 is not considered to differ from Sale on this basis. Instant claim 1 has also been amended to recite that the at least one cathode is porous. Both anodes and cathodes of Sale are porous.

8. Claim 9 has been amended to recite that the displacement of the anode and cathode in the internal chamber is avoided, while claim 15 recites a snug fit. The anodes and cathodes of Sale are shown in figure 1 as extending out to the inner wall

of the reactor chamber where they are connected to electrical leads. Thus, they would fit snugly against the chamber wall. Displacement of the anodes and cathodes would be expected to be minimal in the arrangement of Sale. Should an anode or cathode move significantly, it would contact the adjacent electrode and cause a short circuit.

9. Since the electrodes of Sale are made of materials recited in the instant claims, such as platinized titanium, they would be expected to be capable of treating the same targets recited in amended claims 13 and 14. Newly presented claim 19 recites that the conductive coating is applied by an electrochemical deposition method while claim 20 recites a thermal decomposition method. Sale is silent as to the manner in which the coating is applied to the electrodes. This suggests that the way in which the coating is applied is not critical and that any suitable coating method may be employed. It is not apparent that the manner in which applicant applies results in an electrode different than that of Sale. Newly presented claim 21 recites that the conductive coating is made of one to several coats. By disclosing platinized titanium electrodes, Sale clearly discloses the use of electrodes with at least one coating, thereby meeting the limitation of claim 21.

10. Newly presented claim 18 recites that the anode and cathode comprise a thick metallic network, but do not define sized thick include. Sale discloses the use of electrodes made from screens or plates. Electrodes made from plates would be

expected to be thicker than electrodes made from screens and, by comparison, would be "thick". Choice of any particular size and thickness is a result effective variable based on the amount of water to be treated, durability of the apparatus, and other factors recognized by one of ordinary skill in the art.

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

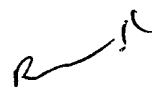
Any inquiry concerning this communication or earlier communications from the examiner should be directed to William T. Leader whose telephone number is 703-308-2530. The examiner can normally be reached on Mondays-Thursdays and alternate Fridays, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on 703-308-1146. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



William Leader
November 13, 2003

ROY KING 
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700